

WHAT IS CLAIMED IS

1. A sample-setting moving stage, comprising
a table on which a sample is set under vacuum or
reduced pressure atmosphere,

5 a guide, consisting of a moving side and a fixed side,
that guides the movement of the table by means of the
relative movement of the two sides,

a temperature sensor installed near the sample-
setting portion,

10 a flow path of the heat-exchanging medium that cools
the sample-setting portion via the guide, and

a temperature adjustment means that adjusts the
temperature of the sample-setting portion by means of the
heat-exchanging control;

15 the flow path of the heat-exchanging medium being
provided through the inside of the non-moving fixed side
guide member of the two constituent members of the guide.

2. A sample-setting moving stage, comprising
a table on which a sample is set under vacuum or
20 reduced pressure atmosphere,

a guide, consisting of a moving side and a fixed side,
that guides the movement of the table by means of the
relative movement of the two sides,

a temperature sensor installed near the sample-
25 setting portion,

a flow path of the heat-exchanging medium that cools

the sample-setting portion via the guide, and

a temperature adjustment means that adjusts the temperature of the sample-setting portion by means of the heat-exchanging control;

5 the flow path of the heat-exchanging medium being provided through the inside of a member attached closely to the non-moving fixed side guide member.

3. A sample-setting moving stage according to Claim 1, wherein the guide is equipped with a means for sliding
10 the moving side guide member and fixed side guide member with the aid of gas lubrication.

4. A sample-setting moving stage, comprising a table on which a sample is set under vacuum or reduced pressure atmosphere,

15 the first guide and the second guide that guide the movement of the table in the X-axis direction and Y-axis direction in a plane, respectively,

a temperature sensor installed near the sample-setting portion,

20 a flow path of the heat-exchanging medium that cools the sample-setting portion via the guide, and

a temperature adjustment means that adjusts the temperature of the sample-setting portion by means of the heat-exchanging control; and

25 further comprising a gas-lubrication type third guide that guides the table in every direction in the plane;

the flow path of the heat-exchanging medium being provided through the inside of the non-moving fixed side guide member of the two constituent members of the third guide or through the inside of a member attached to the fixed side guide member.

5 5. A sample-setting moving stage according to Claim 4, wherein the flow path of the heat-exchanging medium is so widely extended that the flow path is located just under the table almost everywhere in the plane of the table movement.

10 6. A sample-setting moving stage according to Claim 1, further comprising

the second temperature sensor, installed in the heat transfer path from the flow path of the heat-exchanging medium to the sample-setting table, and

15 multiple lines of flow path of the heat-exchanging medium; wherein

the temperature adjustment means adjusts the temperature of the medium, flowing in the multiple lines of flow path independently from each other, based on the information from the second temperature sensor and from the temperature sensor installed near the sample.

20 7. A sample-setting moving stage according to Claim 1, wherein

an electric heat generation or absorption means is installed near the sample, and

the temperature adjustment means adjusts the electric heat generation or absorption means based on the information from the temperature sensor.

8. A sample-setting moving stage according to Claim 1,
5 further comprising

an electric heat generation means installed near the sample, and

a temperature controller that controls, based on the information from the temperature sensor, so that the
10 temperature of the sample-setting portion be closer to desired; wherein

the temperature adjustment means adjusts the temperature of the sample-setting portion, using the heat-exchanging medium while the electric heat generation
15 means is not in operation, so that the temperature of the sample-setting portion be lower than desired.

9. A manufacturing apparatus for circuit pattern, on which a circuit pattern is formed on a sample by irradiation of charged particle ray, X-ray or extreme
20 ultraviolet (EUV), equipped with a sample-setting moving stage according to Claim 1.

10. An inspection apparatus for circuit pattern, on which charged particle ray is radiated onto a sample with circuit pattern so as to inspect the circuit pattern,
25 equipped with a sample-setting moving stage according to Claim 1.